



# **Supplemental Information**

# Energy Policy Act of 2005

## *Comprehensive Energy Legislation*

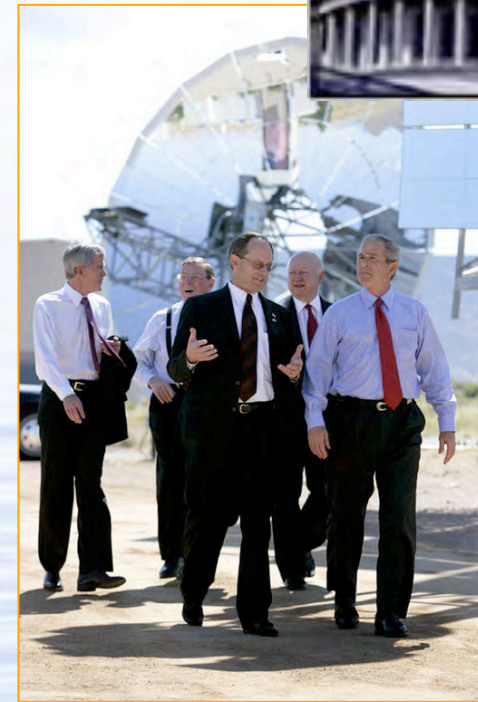
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# Federal Tax Credits for Energy Efficiency

*The Energy Policy Act of 2005 includes Tax Credits for:*

- Commercial Buildings
- Home Builders
- Appliance Manufacturers
- Consumers
  - ➔ Home Improvements
  - ➔ Motor Vehicles
  - ➔ Solar Energy Systems
  - ➔ Fuel Cells



President Bush tours Sandia Solar Tower Complex on August 8, 2005

# Tax Credits for Improving the Energy Efficiency of Commercial Buildings

## Qualified fuel cells, microturbine power plants, and solar equipment

- 30% tax credit **up to a maximum of \$500 per 500 watts** for installing fuel cell power plants (capacity  $\geq 500$  watt and a generation efficiency  $\geq 30\%$ )
- 10% credit for **up to \$200/kW** for stationary microturbine power plants (capacity  $\leq 2,000$  kW and an efficiency  $\geq 26\%$  at ISO conditions)
- 30% credit for qualifying solar energy equipment.
- Incentives apply to equipment placed in service during 2006-2007.

## Cost of energy-efficient (energy savings $\geq 50\%$ ) property installed in new construction during 2006-2007

- Maximum **deduction of \$1.80 per square foot** of the building
- Additionally, a **partial deduction of 60 cents per square foot** would be provided for building subsystems including either the building envelope, lighting, or heating and cooling.



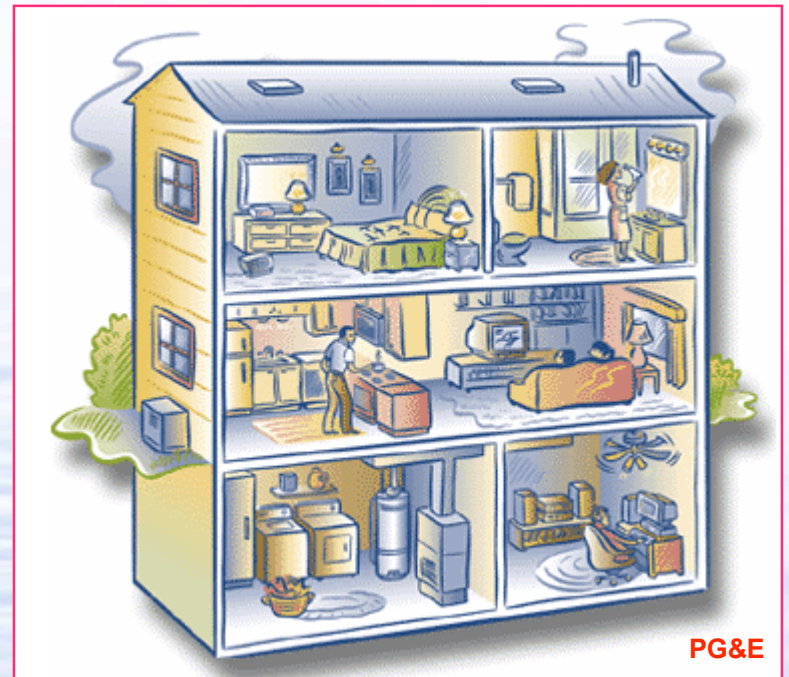
# Tax Credits for Home Builders

The Internal Revenue Service (IRS) has provided the following guidance regarding the tax credits for constructing energy efficient new homes available under the Energy Policy Act of 2005:

[IRS Notice 2006-27](#) — provides guidance for the credit for building energy efficient homes other than manufactured homes.

[IRS Notice 2006-28](#) — provides guidance for the credit for building energy efficient manufactured homes.

- **\$2,000 tax credit** for a home that achieves **50% energy savings**<sup>1</sup>. At least 1/5 of the energy savings must come from building envelope improvements.
- **\$1,000 tax credit** for a home achieving **30% energy savings**<sup>1</sup> **or** a home meeting the [requirements](#) under the ENERGY STAR program.
- Applies to homes completed after August 8, 2005 and sold during 2006 and 2007

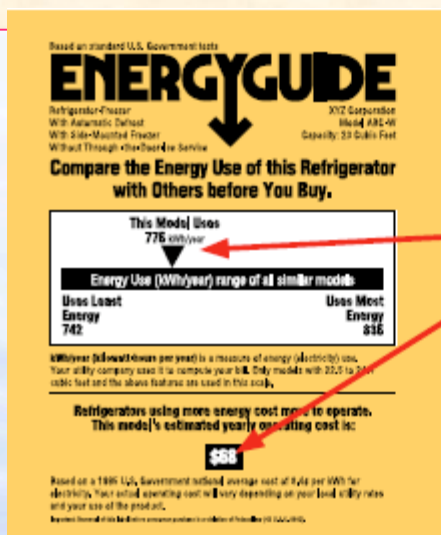


<sup>1</sup> For heating and cooling over the 2004 International Energy Conservation Code (IECC) and supplements

# Tax Credits for Appliance Manufacturers

While not directly affecting consumers, manufacturers of energy efficient clothes washers, dishwashers and refrigerators are eligible for tax breaks themselves, which may lead to increased availability and a reduction in prices for these energy-saving appliances:

- **ENERGY STAR qualified dishwashers and clothes washers** that meet ENERGY STAR's 2007 specification.
- Refrigerators that are more efficient than 2001 federal energy conservation standards



## How to Read the EnergyGuide Label

The EnergyGuide label gives you two important pieces of information you can use to compare different brands and models when shopping for a new refrigerator:

- Estimated energy consumption on a scale showing a range for similar models
- Estimated yearly operating cost based on the national average cost of electricity.



# Summary Of Tax Credits for Consumers

Product Type	Tax Credit Specification	Tax Credit
Exterior Windows and Skylights	ENERGY STAR qualified OR meets IECC <sup>1</sup>	10% of cost, up to \$200 <sup>2</sup> for all windows, skylights and storm windows
Storm windows	Meets IECC <sup>1</sup>	
Exterior Doors		
Storm Doors	< default U-factor requirement assigned to door/storm door combination by the IECC	10% of cost, up to \$500 <sup>2</sup>
Metal Roofs	ENERGY STAR qualified	
Insulation	Meets 2000 IECC & Amendments	
Central A/C	EER 12.5/SEER 15 Split Sys, EER 12/SEER 14 Package Systems	\$300 <sup>2</sup>
Air Source Heat Pumps	HSPF 9 EER 13 SEER 15	
Geo-Thermal Heat Pump	ENERGY STAR	
Furnace or Hot Water Boiler	AFUE 95 for both furnaces and boilers	\$150 <sup>2</sup>
Advanced Main Air Circulating Fan	No more than 2% of furnace total energy use	\$50 <sup>2</sup>

<sup>1</sup>Either the 2001 Supplement of the 2000 International Energy Conservation Code or the 2004 Supplement of the 2003 International Energy Conservation Code.

<sup>2</sup>Subject to a \$500 maximum per homeowner for all improvements combined.



# Summary Of Tax Credits for Consumers

Product Type	Tax Credit Specification	Tax Credit
Gas, Oil, Propane Water Heater	Energy Factor 0.80	\$300 <sup>2</sup>
Electric Heat Pump Water Heater	Energy Factor 2.0	\$300 <sup>2</sup>
Motor Vehicles	Hybrid gasoline-electric, diesel, battery-electric, alternative fuel, and fuel cell vehicles	\$250-\$3,400 for new hybrid car or truck
Solar Water Heating	≥ of the energy generated must come from the sun. The system must be certified by the Solar Rating and Certification Corporation (SRCC).	30% of cost, up to \$2,000
Photovoltaic Systems	Photovoltaic systems must provide electricity for the residence, and must meet applicable fire and electrical code requirement.	30% of cost, up to \$2,000
Fuel Cells	Efficiency of at least 30% and must have a capacity of at least 0.5 kW.	30% of the cost, up to \$1000 per kW of power that can be produced

<sup>2</sup> Subject to a \$500 maximum per homeowner for all improvements combined.



# EPAct 2005 Websites

- **The Energy Policy Act of 2005  
What the Energy Bill Means to You**  
<http://www.energy.gov/taxbreaks.htm>
- **Alternative Fuels Data Center - State & Federal Incentives and  
Laws: Energy Policy Act of 2005**  
[http://www.eere.energy.gov/afdc/laws/epact\\_2005.html](http://www.eere.energy.gov/afdc/laws/epact_2005.html)
- **Florida Solar Energy Center - Tax Credit Opportunities For  
Solar and Energy Efficiency**  
<http://www.fsec.ucf.edu/EPAct-05.htm>
- **ENERGY STAR Federal Tax Credits for Energy Efficiency**  
[http://energystar.gov/index.cfm?c=products.pr\\_tax\\_credits#1](http://energystar.gov/index.cfm?c=products.pr_tax_credits#1)
- **ARE YOU READY TO TAKE ADVANTAGE OF THE NEW  
COMMERCIAL TAX INCENTIVES?**  
[http://energystar.gov/ia/business/comm\\_bldg\\_tax\\_incentives.pdf](http://energystar.gov/ia/business/comm_bldg_tax_incentives.pdf)
- **The Tax Incentives Assistance Project (TIAP)**  
<http://www.energytaxincentives.org/>
- **Commercial Building Tax Deduction Coalition**  
<http://www.efficientbuildings.org/>
- **BUY PRODUCTS THAT MAKE A DIFFERENCE**  
[http://energystar.gov/index.cfm?c=clotheswash.pr\\_clothes\\_washers](http://energystar.gov/index.cfm?c=clotheswash.pr_clothes_washers)



# **Collaborations and Partnerships**

# Partnering with Industry for Success

## FreedomCAR and Fuel Partnership Accomplishments

- Partnership plan
- New roadmaps
  - Hydrogen Production
  - Delivery
  - Fuel Pathways
- Feedback on DOE projects
- Input on DOE goal changes
  - No-go decision on on-board fuel processing
  - Hydrogen cost goal



# Extensive Coordination

## International Partnership for the Hydrogen Economy

- IPHE.net



## Interagency Hydrogen Research and Development Task Force (OSTP lead)

- [www.hydrogen.gov](http://www.hydrogen.gov)



## Federal/State/local (Example)

- California Fuel Cell Partnership
- California Hydrogen Highway Network





# Leadership in Addressing Global Energy and Environmental Security

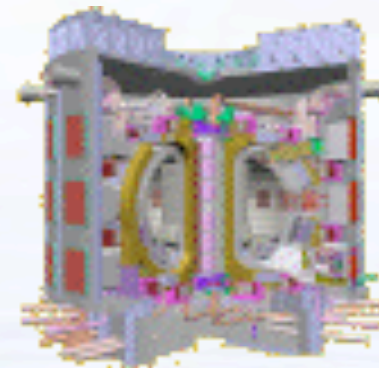


To keep our economy growing, we also need reliable supplies of affordable, environmentally responsible energy. Nearly four years ago, I submitted a comprehensive energy strategy that encourages conservation, alternative sources, a modernized electricity grid, and more production here at home -- including safe, clean nuclear energy. My Clear Skies legislation will cut power plant pollution and improve the health of our citizens. **And my budget provides strong funding for leading-edge technology -- from hydrogen-fueled cars, to clean coal, to renewable sources such as ethanol..**

President George W. Bush  
State of the Union Address Feb. 2, 2005



Carbon Sequestration  
Leadership Forum



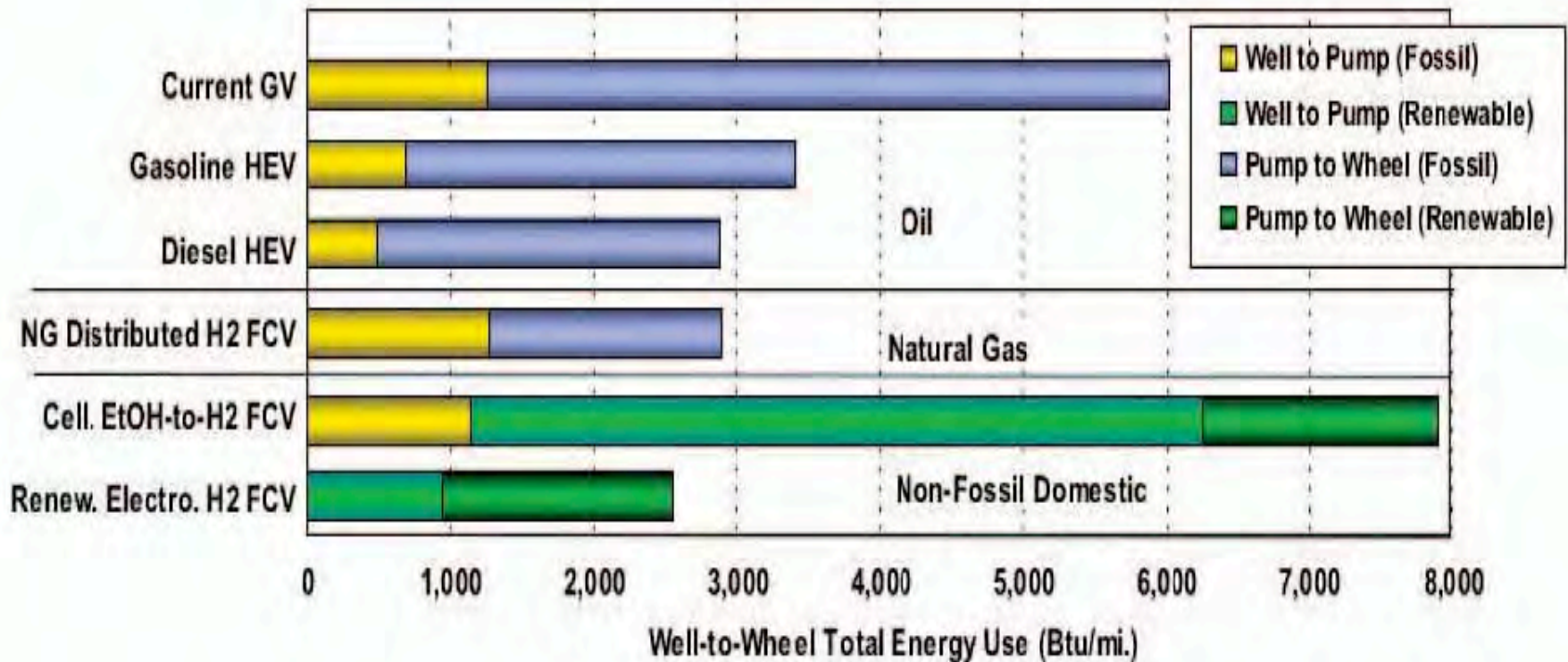
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# **Comparing Vehicle Technologies**

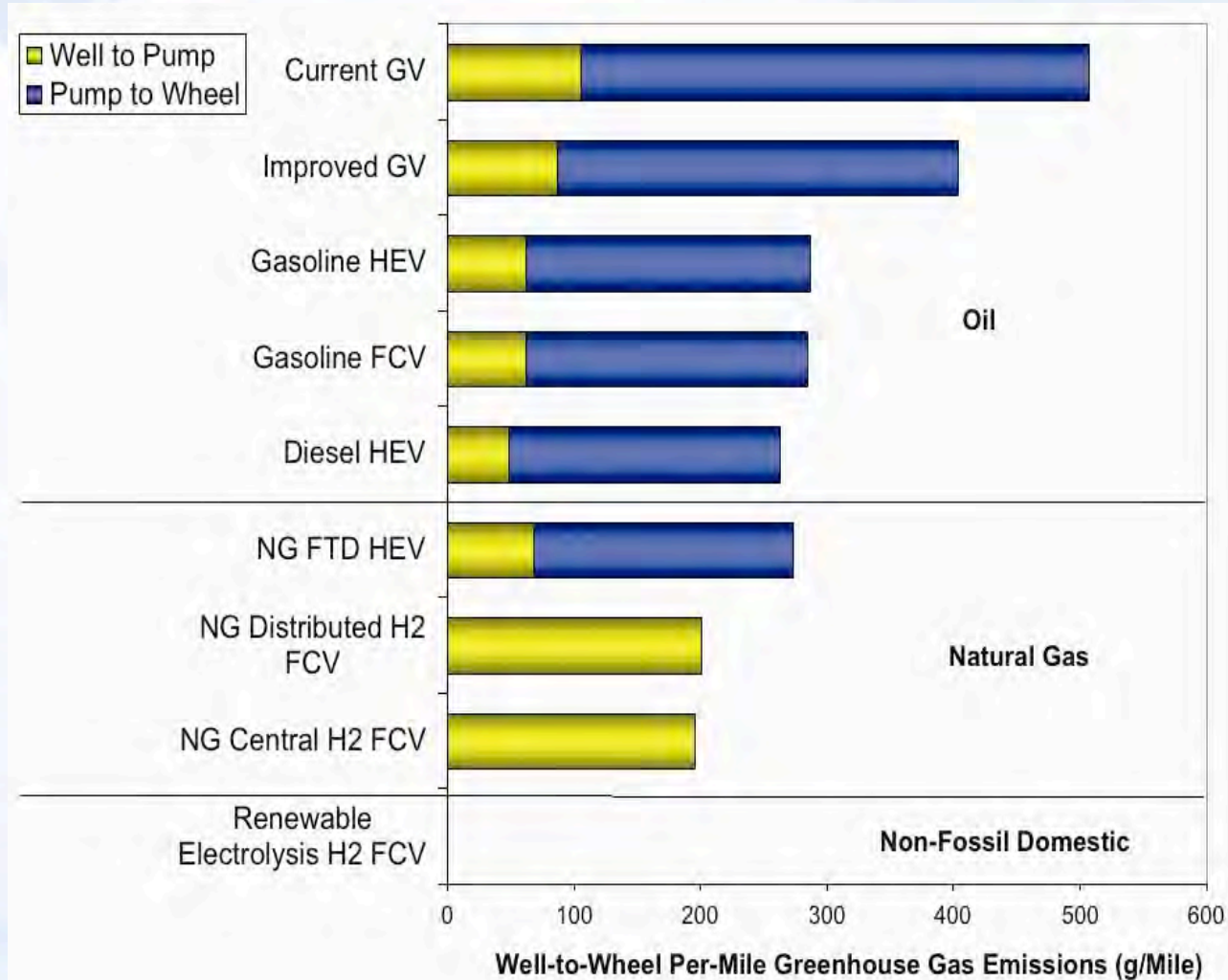
# Well-to-Wheels Energy Use



***Even with fuel production factored in, a fuel cell vehicle powered by hydrogen from natural gas offers improved efficiency over conventional gasoline-hybrid options.***



# Well-to-Wheels Greenhouse Gas Emissions



Source:  
Michael Wang, ANL